

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 1015801635
Source: JPMO
Date Processed by STIC: 4/13/07

ENTERED



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/580,635

DATE: 04/13/2007

TIME: 13:41:04

Input Set : N:\EFS\04_13_07\10580635_efb\ -500-1.txt
 Output Set: N:\CRF4\04132007\J580635.raw

3 <110> APPLICANT: Pastan, Ira H.
 4 Ho, Mitchell
 5 Bang, Sook-Hee
 6 The Government of the United States
 7 as represented by The Secretary of the
 8 Department of Health and Human Services
 10 <120> TITLE OF INVENTION: Mutated Anti-CD22 Antibodies and Immunoconjugates
 12 <130> FILE REFERENCE: 015280-500100US
 14 <140> CURRENT APPLICATION NUMBER: US 10/580,635
 15 <141> CURRENT FILING DATE: 2006-05-25
 17 <150> PRIOR APPLICATION NUMBER: US 60/525,371
 18 <151> PRIOR FILING DATE: 2003-11-25
 20 <150> PRIOR APPLICATION NUMBER: WO PCT/US04/39617
 21 <151> PRIOR FILING DATE: 2004-11-24
 23 <160> NUMBER OF SEQ ID NOS: 30
 25 <170> SOFTWARE: PatentIn Ver. 2.1
 27 <210> SEQ ID NO: 1
 28 <211> LENGTH: 321
 29 <212> TYPE: DNA
 30 <213> ORGANISM: Mus sp.
 32 <220> FEATURE:
 33 <223> OTHER INFORMATION: RFB4 mouse IgG1 anti-human CD22 monoclonal
 34 antibody light chain variable region (VL)
 36 <220> FEATURE:
 37 <221> NAME/KEY: CDS
 38 <222> LOCATION: (1)..(321)
 39 <223> OTHER INFORMATION: RFB4 mouse IgG1 anti-human CD22 monoclonal
 40 antibody light chain variable region (VL)
 42 <400> SEQUENCE: 1
 43 gat atc cag atg acc cag act aca tcc tcc ctg tct gcc tct ctg gga 48
 44 Asp Ile Gln Met Thr Gln Thr Ser Ser Leu Ser Ala Ser Leu Gly
 45 1 5 10 15
 47 gac aga gtc acc att agt tgc agg gca agt cag gac att agc aat tat 96
 48 Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr
 49 20 25 30
 51 tta aac tgg tat cag cag aaa cca gat gga act gtt aaa ctc ctg atc 144
 52 Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Ile
 53 35 40 45
 55 tac tac aca tca ata tta cac tca gga gtc cca tca agg ttc agt ggc 192
 56 Tyr Tyr Thr Ser Ile Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly
 57 50 55 60
 59 agt ggg tct gga aca gat tat tct ctc acc att agc aac ctg gag caa 240
 60 Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/580,635

DATE: 04/13/2007
TIME: 13:41:04

Input Set : N:\EFS\04_13_07\10580635_ef5\500-1.txt
Output Set: N:\CRF4\04132007\J580635.raw

61	65	70	75	80	
63	gaa gat ttt gcc act tac ttt tgc caa cag ggt aat acg ctt ccg tgg				288
64	Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp				
65	85	90		95	
67	acg ttc ggt gga ggc acc aag ctg gaa atc aaa				321
68	Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys				
69	100	105			
72	<210> SEQ ID NO: 2				
73	<211> LENGTH: 107				
74	<212> TYPE: PRT				
75	<213> ORGANISM: Mus sp.				
77	<220> FEATURE:				
78	<223> OTHER INFORMATION: RFB4 mouse IgG1 anti-human CD22 monoclonal antibody light chain variable region (VL)				
79	antibody light chain variable region (VL)				
81	<400> SEQUENCE: 2				
82	Asp Ile Gln Met Thr Gln Thr Ser Ser Leu Ser Ala Ser Leu Gly				
83	1 5 10 15				
85	Asp Arg Val Thr Ile Ser Cys Arg Ala Ser Gln Asp Ile Ser Asn Tyr				
86	20 25 30				
88	Leu Asn Trp Tyr Gln Gln Lys Pro Asp Gly Thr Val Lys Leu Leu Ile				
89	35 40 45				
91	Tyr Tyr Thr Ser Ile Leu His Ser Gly Val Pro Ser Arg Phe Ser Gly				
92	50 55 60				
94	Ser Gly Ser Gly Thr Asp Tyr Ser Leu Thr Ile Ser Asn Leu Glu Gln				
95	65 70 75 80				
97	Glu Asp Phe Ala Thr Tyr Phe Cys Gln Gln Gly Asn Thr Leu Pro Trp				
98	85 90 95				
100	Thr Phe Gly Gly Thr Lys Leu Glu Ile Lys				
101	100 105				
104	<210> SEQ ID NO: 3				
105	<211> LENGTH: 369				
106	<212> TYPE: DNA				
107	<213> ORGANISM: Mus sp.				
109	<220> FEATURE:				
110	<223> OTHER INFORMATION: RFB4 mouse IgG1 anti-human CD22 monoclonal antibody heavy chain variable region (VH)				
111	antibody heavy chain variable region (VH)				
113	<220> FEATURE:				
114	<221> NAME/KEY: CDS				
115	<222> LOCATION: (1)..(369)				
116	<223> OTHER INFORMATION: RFB4 mouse IgG1 anti-human CD22 monoclonal antibody heavy chain variable region (VH)				
117	antibody heavy chain variable region (VH)				
119	<400> SEQUENCE: 3				
120	gaa gtg cag ctg gtg gag tct ggg gga ggc tta gtg aag cct gga ggg			48	
121	Glu Val Gln Leu Val Glu Ser Gly Gly Leu Val Lys Pro Gly Gly				
122	1 5 10 15				
124	tcc ctg aaa ctc tcc tgt gca gcc tct gga ttc gct ttc agt atc tat			96	
125	Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ile Tyr				
126	20 25 30				
128	gac atg tct tgg gtt cgc cag act ccg gag aag agg ctg gag tgg gtc			144	

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/580,635

DATE: 04/13/2007

TIME: 13:41:04

Input Set : N:\EFS\04_13_07\10580635_ef\ -500-1.txt
 Output Set: N:\CRF4\04132007\J580635.raw

```

129 Asp Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
130      35          40          45
132 gca tac att agt agt ggt ggt acc acc tac tat cca gac act gtg      192
133 Ala Tyr Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Pro Asp Thr Val
134      50          55          60
136 aag ggc cga ttc acc atc tcc aga gac aat gcc aag aac acc ctg tac      240
137 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
138      65          70          75          80
140 ctg caa atg agc agt ctg aag tct gag gac aca gcc atg tat tac tgt      288
141 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
142      85          90          95
144 gca aga cat agt ggc tac ggt agt agc tac ggg gtt ttg ttt gct tac      336
145 Ala Arg His Ser Gly Tyr Gly Ser Ser Tyr Gly Val Leu Phe Ala Tyr
146      100         105         110
148 tgg ggc caa ggg act ctg gtc act gtc tct gca
149 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
150      115         120
153 <210> SEQ ID NO: 4
154 <211> LENGTH: 123
155 <212> TYPE: PRT
156 <213> ORGANISM: Mus sp.
158 <220> FEATURE:
159 <223> OTHER INFORMATION: RFB4 mouse IgG1 anti-human CD22 monoclonal
160 antibody heavy chain variable region (VH)
162 <400> SEQUENCE: 4
163 Glu Val Gln Leu Val Glu Ser Gly Gly Leu Val Lys Pro Gly Gly
164    1           5           10          15
166 Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Ala Phe Ser Ile Tyr
167    20          25          30
169 Asp Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val
170      35          40          45
172 Ala Tyr Ile Ser Ser Gly Gly Thr Thr Tyr Tyr Pro Asp Thr Val
173      50          55          60
175 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr
176      65          70          75          80
178 Leu Gln Met Ser Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys
179      85          90          95
181 Ala Arg His Ser Gly Tyr Gly Ser Ser Tyr Gly Val Leu Phe Ala Tyr
182      100         105         110
184 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
185      115         120
188 <210> SEQ ID NO: 5
189 <211> LENGTH: 4
190 <212> TYPE: PRT
191 <213> ORGANISM: Artificial Sequence
193 <220> FEATURE:
194 <223> OTHER INFORMATION: Description of Artificial Sequence:carboxyl
195 terminal fragment binding KDEL recycling receptor
196 for transport of construct into cytosol from

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/580,635

DATE: 04/13/2007

TIME: 13:41:04

Input Set : N:\EFS\04_13_07\10580635_efb\ -500-1.txt
Output Set: N:\CRF4\04132007\J580635.raw

197 endoplasmic reticulum
199 <400> SEQUENCE: 5
200 Lys Asp Glu Leu
201 1
204 <210> SEQ ID NO: 6
205 <211> LENGTH: 4
206 <212> TYPE: PRT
207 <213> ORGANISM: Artificial Sequence
209 <220> FEATURE:
210 <223> OTHER INFORMATION: Description of Artificial Sequence:carboxyl
211 terminal fragment binding KDEL recycling receptor
212 for transport of construct into cytosol from
213 endoplasmic reticulum
215 <400> SEQUENCE: 6
216 Arg Glu Asp Leu
217 1
220 <210> SEQ ID NO: 7
221 <211> LENGTH: 6
222 <212> TYPE: PRT
223 <213> ORGANISM: Artificial Sequence
225 <220> FEATURE:
226 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
227 light chain (VL) complementarity determining
228 region 1 (CDR1)
230 <400> SEQUENCE: 7
231 Gln Asp Ile His Gly Tyr
232 1 5
235 <210> SEQ ID NO: 8
236 <211> LENGTH: 6
237 <212> TYPE: PRT
238 <213> ORGANISM: Artificial Sequence
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
242 light chain (VL) complementarity determining
243 region 1 (CDR1)
245 <400> SEQUENCE: 8
246 Gln Asp Ile Gly Arg Tyr
247 1 5
250 <210> SEQ ID NO: 9
251 <211> LENGTH: 6
252 <212> TYPE: PRT
253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
257 light chain (VL) complementarity determining
258 region 1 (CDR1)
260 <400> SEQUENCE: 9
261 Gln Asp Ile Arg Gly Tyr
262 1 5

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/580,635

DATE: 04/13/2007

TIME: 13:41:04

Input Set : N:\EFS\04_13_07\10580635_ef5\-\500-1.txt
Output Set: N:\CRF4\04132007\J580635.raw

265 <210> SEQ ID NO: 10
266 <211> LENGTH: 6
267 <212> TYPE: PRT
268 <213> ORGANISM: Artificial Sequence
270 <220> FEATURE:
271 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
272 light chain (VL) complementarity determining
273 region 1 (CDR1)
275 <400> SEQUENCE: 10
276 Gln Asp Ile Ala Arg Tyr
277 1 5
280 <210> SEQ ID NO: 11
281 <211> LENGTH: 3
282 <212> TYPE: PRT
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
287 light chain (VL) complementarity determining
288 region 2 (CDR2)
290 <400> SEQUENCE: 11
291 Tyr Thr Ser
292 1
295 <210> SEQ ID NO: 12
296 <211> LENGTH: 9
297 <212> TYPE: PRT
298 <213> ORGANISM: Artificial Sequence
300 <220> FEATURE:
301 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
302 light chain (VL) complementarity determining
303 region 3 (CDR3)
305 <400> SEQUENCE: 12
306 Gln Gln Gly Asn Thr Leu Pro Trp Thr
307 1 5
310 <210> SEQ ID NO: 13
311 <211> LENGTH: 8
312 <212> TYPE: PRT
313 <213> ORGANISM: Artificial Sequence
315 <220> FEATURE:
316 <223> OTHER INFORMATION: Description of Artificial Sequence:RFB4 variable
317 heavy chain (VH) complementarity determining
318 region 1 (CDR1)
320 <400> SEQUENCE: 13
321 Gly Phe Ala Phe Ser Ile Tyr Asp
322 1 5
325 <210> SEQ ID NO: 14
326 <211> LENGTH: 8
327 <212> TYPE: PRT
328 <213> ORGANISM: Artificial Sequence
330 <220> FEATURE:

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/580,635

DATE: 04/13/2007

TIME: 13:41:05

Input Set : N:\EFS\04_13_07\10580635_efs\ -500-1.txt
Output Set: N:\CRF4\04132007\J580635.raw